

t31_cfdiff_1 (TMSwrwNmdvfgSdRdqgLyxCxW- ShFcd9xtHG8)

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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 $k19_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k8_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k2_numbers k2_numbers)))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k2_numbers k2_numbers)))) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 k2_numbers) \Rightarrow (((r1_cfdiff_1 X0 X2) \wedge (r1_cfdiff_1 \\ & X1 X2)) \Rightarrow ((r1_cfdiff_1 (k19_valued_1 k2_numbers k2_numbers k2_numbers \\ & X0 X1) X2) \wedge (k2_cfdiff_1 (k19_valued_1 k2_numbers k2_numbers k2_numbers \\ & X0 X1) X2 = k8_complex1 (k9_complex1 (k7_partfun1 k2_numbers X1 \\ & X2) (k2_cfdiff_1 X0 X2)) (k9_complex1 (k7_partfun1 k2_numbers \\ & X0 X2) (k2_cfdiff_1 X1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X1)) \Rightarrow ((X0 \in X2) \Rightarrow (m1_subset_1 X0 X1)) \tag{3}$$

Assume the following.

$$v1_membered k2_numbers \tag{4}$$

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.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. ((v1_membered \\ & X1) \wedge ((v1_membered X2) \wedge (((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))) \wedge ((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X2))))))) \Rightarrow ((v1_funct_1 (k19_valued_1 X0 X1 X2 \\ & X3 X4)) \wedge (m1_subset_1 (k19_valued_1 X0 X1 X2 X3 X4) (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 k2_numbers)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k2_numbers k2_numbers)))) \Rightarrow (\forall X1. (r2_cfdiff_1 X0 X1) \Rightarrow (\\ & \forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k2_numbers k2_numbers)))) \Rightarrow ((X2 = k3_cfdiff_1 X0 X1) \Leftrightarrow ((k1_relset_1 \\ & k2_numbers X2 = X1) \wedge (\forall X3. (m1_subset_1 X3 k2_numbers) \Rightarrow (\\ & (X3 \in X1) \Rightarrow (k7_partfun1 k2_numbers X2 X3 = k2_cfdiff_1 X0 X3)))))) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k2_numbers k2_numbers)))) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k2_numbers k2_numbers)))) \Rightarrow (\forall X2. \\ & ((v6_cfdiff_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 k2_numbers))) \Rightarrow \\ & (((r1_tarski X2 (k1_relset_1 k2_numbers (k19_valued_1 k2_numbers \\ & k2_numbers k2_numbers X0 X1))) \wedge ((r2_cfdiff_1 X0 X2) \wedge (r2_cfdiff_1 \\ & X1 X2))) \Rightarrow ((r2_cfdiff_1 (k19_valued_1 k2_numbers k2_numbers k2_numbers \\ & X0 X1) X2) \wedge (\forall X3. (m1_subset_1 X3 k2_numbers) \Rightarrow ((X3 \in X2) \Rightarrow \\ & (k7_partfun1 k2_numbers (k3_cfdiff_1 (k19_valued_1 k2_numbers \\ & k2_numbers k2_numbers X0 X1) X2) X3 = k8_complex1 (k9_complex1 (\\ & k7_partfun1 k2_numbers X1 X3) (k2_cfdiff_1 X0 X3)) (k9_complex1 \\ & (k7_partfun1 k2_numbers X0 X3) (k2_cfdiff_1 X1 X3)))))))) \end{aligned}$$