

l5_cfdiff_2

(TMZjwdZw9AViAAFiFN1RDXZ3qYuDS321Pov)

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Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k2_numbers : \iota$ 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 $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k25_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_complex1 : \iota$ be given. Let $v2_relat_1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_complex1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k1_xcmplx_0 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow \\ (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (\forall X2.k1_funct_1 (k24_valued_1 \\ X0 X1) X2 = k3_xcmplx_0 X1 (k1_funct_1 X0 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ ((v2_relat_1 X0) \Leftrightarrow (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\ (k8_nat_1 k2_numbers X0 X1 \neq k5_complex1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (\forall X1.((v1_funct_1 \\ X1) \wedge ((v1_funct_2 X1 k5_numbers k2_numbers) \wedge (m1_subset_1 X1 (\\ k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow ((v2_relat_1 \\ X1) \Rightarrow ((X0 = k5_complex1) \vee (v2_relat_1 (k25_valued_1 k5_numbers \\ k2_numbers X1 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 k6_numbers = k6_numbers) \quad (4)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (5)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$k4_xcmplx_0 k1_xcmplx_0 = k3_xcmplx_0 (k4_xcmplx_0 np_1) k1_xcmplx_0 \quad (7)$$

Assume the following.

$$k3_xcmplx_0 k1_xcmplx_0 (k3_xcmplx_0 (k4_xcmplx_0 np_1) k1_xcmplx_0) = \\ np_1 \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 \\ (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((v1_funct_1 X1) \wedge ((v1_funct_2 \\ X1 k5_numbers X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ X0)))))) \wedge (v7_ordinal1 X2)) \Rightarrow (k8_nat_1 X0 X1 X2 = k1_funct_1 X1 X2) \end{aligned} \quad (11)$$

Assume the following.

$$k7_complex1 = k1_xcmplx_0 \quad (12)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (13)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (14)$$

Assume the following.

$$k5_complex1 = k1_xboole_0 \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_membered X1)\wedge \\ & (((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1))))\wedge(v1_xcmplx_0 X3)))\Rightarrow(k25_valued_1 X0 X1 X2 X3 = k24_valued_1 \\ & X2 X3) \end{aligned} \quad (16)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow((v1_xcmplx_0 (k4_xcmplx_0 X0))\wedge (v1_xreal_0 (k4_xcmplx_0 X0))) \quad (18)$$

Assume the following.

$$v1_xcmplx_0 k1_xcmplx_0 \quad (19)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (20)$$

Assume the following.

$$v1_membered k2_numbers \quad (21)$$

Assume the following.

$$\forall X0.((\neg v3_xreal_0 X0)\wedge(v1_xreal_0 X0))\Rightarrow((v1_xcmplx_0 (k4_xcmplx_0 X0))\wedge(\neg v2_xreal_0 (k4_xcmplx_0 X0))) \quad (22)$$

Assume the following.

$$m1_subset_1 k7_complex1 k2_numbers \quad (23)$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \quad (24)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xcmplx_0\ X3)))\Rightarrow((v1_funct_1\ (k25_valued_1\ X0\ X1 \\ & X2\ X3))\wedge(m1_subset_1\ (k25_valued_1\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ k2_numbers)))) \end{aligned} \quad (25)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (26)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ k1_numbers))\Rightarrow(v3_membered\ X0) \quad (27)$$

Assume the following.

$$\forall X0.((v1_xxreal_0\ X0)\wedge(v3_xxreal_0\ X0))\Rightarrow((\neg v1_xboole_0\ X0)\wedge((v1_xxreal_0\ X0)\wedge(\neg v2_xxreal_0\ X0))) \quad (28)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0)\Rightarrow(v1_xxreal_0\ X0) \quad (29)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v4_relat_1\ X2\ X0)\wedge(v5_relat_1\ X2\ X1)) \quad (30)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge(v5_relat_1\ X0\ k2_numbers))\Rightarrow((v1_relat_1\ X0)\wedge(v1_valued_0\ X0)) \quad (31)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \quad (32)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xreal_0\ X1)) \quad (33)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1\ X0)\wedge((v1_funct_2\ X0\ k5_numbers\ k2_numbers)\wedge \\ & (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ k2_numbers))))\Rightarrow \\ & (\forall X1.((v1_funct_1\ X1)\wedge((v1_funct_2\ X1\ k5_numbers\ k2_numbers)\wedge \\ & (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ k2_numbers))))\Rightarrow \\ & ((r2_relset_1\ k5_numbers\ k2_numbers\ X1\ (k25_valued_1\ k5_numbers \\ & k2_numbers\ X0\ k7_complex1))\Rightarrow((v2_relat_1\ X0)\Leftrightarrow(v2_relat_1\ X1)))) \end{aligned}$$