t5_cfdiff_1 (TMU8NdoPpF9mgTf2SEkFj3Db2q6xQo8PqGL)

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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 $v5\_valued\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_comseq\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v3\_valued\_0 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $v6\_membered : \iota \Rightarrow o$ be given. Let $v4\_valued\_0 : \iota \Rightarrow o$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((X0 \in k9\_xtuple\_0\ (k3\_relat\_1\ X2\ X1)) \Rightarrow (k1\_funct\_1\ (k3\_relat\_1\ X2\ X1)\ X0 = k1\_funct\_1\ X1\ (k1\_funct\_1\ X2\ X0)))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge ((\neg v1\_xboole\_0\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ X0\ X1) \Leftrightarrow (m1\_subset\_1\ X2\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ k5\_numbers)\wedge((v5\_valued\_0\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k5\_numbers))))))\wedge((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ k2\_numbers)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k2\_numbers))))))\Rightarrow(k9\_comseq\_3\ X0\ X1 = k3\_relat\_1\ X0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0)))))\wedge(v7\_ordinal1\ X2))\Rightarrow(k8\_nat\_1\ X0\ X1\ X2 = k1\_funct\_1\ X1\ X2) \tag{6}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0)\wedge(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge(m1\_subset\_1\ X3\ X0)))\Rightarrow(k3\_funct\_2\ X0\ X1\ X2\ X3 = k1\_funct\_1\ X2\ X3) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v3\_valued\_0\ X0)))\Rightarrow(k1\_seq\_1\ X0\ X1 = k1\_funct\_1\ X0\ X1) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v4\_relat\_1\ X1\ X0))\Rightarrow(k1\_relset\_1\ X0\ X1 = k9\_xtuple\_0\ X1) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(\neg v1\_xboole\_0\ X1)\Rightarrow(\exists X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ X0)\wedge((v5\_relat\_1\ X2\ X1)\wedge((v1\_funct\_1\ X2)\wedge(v1\_partfun1\ X2\ X0))))))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.\exists X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\wedge((v1\_xboole\_0\ X2)\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ X0)\wedge(v5\_relat\_1\ X2\ X1)))) \tag{12}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k4\_ordinal1)\wedge(v3\_ordinal1\ k4\_ordinal1) \tag{13}$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v4\_valued\_0\ X0)))\Rightarrow(v7\_ordinal1\ (k1\_funct\_1\ X0\ X1)) \tag{15}$$

Assume the following.

$$\neg v1\_xboole\_0\ k2\_numbers \tag{16}$$

Assume the following.

$$\neg v1\_xboole\_0\ k1\_numbers \tag{17}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ k5\_numbers)\wedge((v5\_valued\_0\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k5\_numbers))))))\wedge((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ k2\_numbers)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k2\_numbers))))))\Rightarrow((v1\_funct\_1\ (k9\_comseq\_3\ X0\ X1))\wedge((v1\_funct\_2\ (k9\_comseq\_3\ X0\ X1)\ k5\_numbers\ k2\_numbers)\wedge(m1\_subset\_1\ (k9\_comseq\_3\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k2\_numbers))))) \tag{18}$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \tag{19}$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1\ (k3\_relat\_1\ X0\ X1) \tag{20}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(((X1\neq k1\_xboole\_0)\Rightarrow((v1\_funct\_2\ X2\ X0\ X1)\Leftrightarrow(X0 = k1\_relset\_1\ X0\ X2)))\wedge((X1 = k1\_xboole\_0)\Rightarrow((v1\_funct\_2\ X2\ X0\ X1)\Leftrightarrow(X2 = k1\_xboole\_0)))) \tag{21}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))\Rightarrow(v3\_membered\ X0) \tag{22}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(\neg v1\_xboole\_0\ X1))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(((v1\_funct\_1\ X2)\wedge(v1\_funct\_2\ X2\ X0\ X1))\Rightarrow((v1\_funct\_1\ X2)\wedge((\neg v1\_xboole\_0\ X2)\wedge(v1\_funct\_2\ X2\ X0\ X1))))) \tag{23}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v4\_relat\_1\ X2\ X0)\wedge(v5\_relat\_1\ X2\ X1)) \tag{24}$$

Assume the following.

$$\forall X0.\forall X1.(v6\_membered\ X1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v4\_valued\_0\ X2)) \tag{25}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{26}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v1\_partfun1\ X2\ X0)\Rightarrow(v1\_funct\_2\ X2\ X0\ X1)) \tag{27}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(v1\_funct\_1\ X0) \tag{28}$$

Assume the following.

$$\forall X0.\forall X1.(v3\_membered\ X1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v3\_valued\_0\ X2)) \tag{29}$$

Theorem 1

$$\forall X0.((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ k2\_numbers)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k2\_numbers)))))\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ k5\_numbers)\wedge((v5\_valued\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k5\_numbers))))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ k1\_numbers\ k5\_numbers)\Rightarrow(k3\_funct\_2\ k5\_numbers\ k2\_numbers\ (k9\_comseq\_3\ X1\ X0)\ X2 = k8\_nat\_1\ k2\_numbers\ X0\ (k1\_seq\_1\ X1\ X2))))$$