t5_hfdiff_1 (TMb-MvWGzNSK27aZnYEGFVrC3VCuXC4mzLci)

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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 $k1\_numbers : \iota$ be given. Let $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Let $k1\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_valued\_0 : \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_xcmplx\_0\ X0) \wedge ((v1\_xcmplx\_0\ X1) \wedge (v1\_xcmplx\_0\ X2))) \Rightarrow (k3\_xcmplx\_0\ (k2\_xcmplx\_0\ X0\ X1)\ X2 = k2\_xcmplx\_0\ (k3\_xcmplx\_0\ X0\ X2)\ (k3\_xcmplx\_0\ X1\ X2)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \Rightarrow ((r2\_relset\_1\ X0\ X1\ X2\ X3) \Leftrightarrow (X2 = X3)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers) \wedge (v1\_xreal\_0\ X1)) \Rightarrow (k7\_real\_1\ X0\ X1 = k2\_xcmplx\_0\ X0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v3\_membered\ X1) \wedge ((v3\_membered\ X2) \wedge (((v1\_funct\_1\ X3) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \wedge ((v1\_funct\_1\ X4) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X2))))))) \Rightarrow (k3\_valued\_1\ X0\ X1\ X2\ X3\ X4 = k1\_valued\_1\ X3\ X4) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v3\_membered\ X1)\wedge (((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\wedge(v1\_xreal\_0\ X3)))\Rightarrow(k26\_valued\_1\ X0\ X1\ X2\ X3 = k24\_valued\_1\ X2\ X3) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.k3\_xboole\_0\ X0\ X0 = X0 \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_valued\_0\ X0)))\Rightarrow(v1\_xcmplx\_0\ (k1\_funct\_1\ X0\ X1)) \tag{7}$$

Assume the following.

$$v3\_membered\ k1\_numbers \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(m1\_subset\_1\ (k7\_real\_1\ X0\ X1)\ k1\_numbers) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v3\_membered\ X1)\wedge((v3\_membered\ X2)\wedge(((v1\_funct\_1\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\wedge((v1\_funct\_1\ X4)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X2)))))))\Rightarrow((v1\_funct\_1\ (k3\_valued\_1\ X0\ X1\ X2\ X3\ X4))\wedge(m1\_subset\_1\ (k3\_valued\_1\ X0\ X1\ X2\ X3\ X4)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers)))) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v3\_membered\ X1)\wedge (((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\wedge(v1\_xreal\_0\ X3)))\Rightarrow((v1\_funct\_1\ (k26\_valued\_1\ X0\ X1\ X2\ X3))\wedge(m1\_subset\_1\ (k26\_valued\_1\ X0\ X1\ X2\ X3)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers)))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_valued\_0\ X0)))\wedge(v1\_xcmplx\_0\ X1))\Rightarrow((v1\_relat\_1\ (k24\_valued\_1\ X0\ X1))\wedge(v1\_funct\_1\ (k24\_valued\_1\ X0\ X1))) \tag{12}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_valued\_0\ X0)))\Rightarrow (\forall X1.(v1\_xcmplx\_0\ X1)\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge(v1\_funct\_1\ X2))\Rightarrow((X2 = k24\_valued\_1\ X0\ X1)\Leftrightarrow((k9\_xtuple\_0\ X2 = k9\_xtuple\_0\ X0)\wedge(\forall X3.(X3 \in k9\_xtuple\_0\ X2)\Rightarrow(k1\_funct\_1\ X2\ X3 = k3\_xcmplx\_0\ X1\ (k1\_funct\_1\ X0\ X3))))))) \tag{13}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_valued\_0\ X0)))\Rightarrow (\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_valued\_0\ X1)))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge(v1\_funct\_1\ X2))\Rightarrow((X2 = k1\_valued\_1\ X0\ X1)\Leftrightarrow((k9\_xtuple\_0\ X2 = k3\_xboole\_0\ (k9\_xtuple\_0\ X0)\ (k9\_xtuple\_0\ X1))\wedge(\forall X3.(X3 \in k9\_xtuple\_0\ X2)\Rightarrow(k1\_funct\_1\ X2\ X3 = k2\_xcmplx\_0\ (k1\_funct\_1\ X0\ X3)\ (k1\_funct\_1\ X1\ X3))))))) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k7\_real\_1\ X0\ X1 = k7\_real\_1\ X1\ X0) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v3\_membered\ X1)\wedge((v3\_membered\ X2)\wedge(((v1\_funct\_1\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\wedge((v1\_funct\_1\ X4)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X2)))))))\Rightarrow(k3\_valued\_1\ X0\ X1\ X2\ X3\ X4 = k3\_valued\_1\ X0\ X1\ X2\ X4\ X3) \tag{16}$$

Assume the following.

$$\forall X0.(v3\_membered\ X0)\Rightarrow(v1\_membered\ X0) \tag{17}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{18}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_membered\ X1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_valued\_0\ X2)) \tag{19}$$

Assume the following.

$$\forall X0.(v3\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (v1\_xreal\_0\ X1)) \tag{20}$$

Assume the following.

$$\forall X0.(v1\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (v1\_xcmplx\_0\ X1)) \tag{21}$$

Theorem 1

$$\forall X0.((v1\_funct\_1\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_numbers)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ k1\_numbers)\Rightarrow(r2\_relset\_1\ k1\_numbers\ k1\_numbers\ (k3\_valued\_1\ k1\_numbers\ k1\_numbers\ k1\_numbers\ (k26\_valued\_1\ k1\_numbers\ k1\_numbers\ X0\ X1)\ (k26\_valued\_1\ k1\_numbers\ k1\_numbers\ X0\ X2))\ (k26\_valued\_1\ k1\_numbers\ k1\_numbers\ X0\ (k7\_real\_1\ X1\ X2)))))$$