t5_bhsp_4 (TM-RvW5GhDYY5DxJyJApFbh9dn2gcD7cjJfE)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v2\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v3\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v5\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v6\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v7\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v8\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v2\_bhsp\_1 : \iota \Rightarrow o$ be given. Let $l1\_bhsp\_1 : \iota \Rightarrow o$ be given. 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 $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_bhsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_normsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_bhsp\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $k2\_normsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v5\_rlvect\_1\ X1) \wedge ((v6\_rlvect\_1\ X1) \wedge ((v7\_rlvect\_1\ X1) \wedge ((v8\_rlvect\_1\ X1) \wedge (l1\_rlvect\_1\ X1)))))) \Rightarrow (\forall X2.((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ k5\_numbers\ (u1\_struct\_0\ X1)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X1))))))) \Rightarrow (r2\_funct\_2\ k5\_numbers\ (u1\_struct\_0\ X1)\ (k1\_bhsp\_4\ X1\ (k5\_normsp\_1\ X1\ X2\ X0))\ (k5\_normsp\_1\ X1\ (k1\_bhsp\_4\ X1\ X2)\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge (l2\_algstr\_0\ X0)))) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ k5\_numbers\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0))))))) \Rightarrow (\forall X2.((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ k5\_numbers\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0))))))) \Rightarrow (r2\_funct\_2\ k5\_numbers\ (u1\_struct\_0\ X0)\ (k2\_normsp\_1\ X0\ (k1\_bhsp\_4\ X0\ X1)\ (k1\_bhsp\_4\ X0\ X2))\ (k1\_bhsp\_4\ X0\ (k2\_normsp\_1\ X0\ X1\ X2))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X2)\wedge ((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X0\ X1)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))\Rightarrow((r2\_funct\_2\ X0\ X1\ X2\ X3)\Leftrightarrow(X2 = X3)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v5\_rlvect\_1\ X0)\wedge((v6\_rlvect\_1\ X0)\wedge((v7\_rlvect\_1\ X0)\wedge((v8\_rlvect\_1\ X0)\wedge((v2\_bhsp\_1\ X0)\wedge(l1\_bhsp\_1\ X0))))))))))\wedge(((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0))))))\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ k5\_numbers\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0)))))))\Rightarrow(k6\_bhsp\_1\ X0\ X1\ X2 = k2\_normsp\_1\ X0\ X1\ X2) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_rlvect\_1\ X0)\Rightarrow(l2\_algstr\_0\ X0) \tag{5}$$

Assume the following.

$$\forall X0.(l1\_bhsp\_1\ X0)\Rightarrow(l1\_rlvect\_1\ X0) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge(l1\_rlvect\_1\ X0))\wedge(((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0))))))\wedge(m1\_subset\_1\ X2\ k1\_numbers)))\Rightarrow((v1\_funct\_1\ (k5\_normsp\_1\ X0\ X1\ X2))\wedge((v1\_funct\_2\ (k5\_normsp\_1\ X0\ X1\ X2)\ k5\_numbers\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ (k5\_normsp\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0)))))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge(l2\_algstr\_0\ X0))\wedge((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0)))))))\Rightarrow((v1\_funct\_1\ (k1\_bhsp\_4\ X0\ X1))\wedge((v1\_funct\_2\ (k1\_bhsp\_4\ X0\ X1)\ k5\_numbers\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ (k1\_bhsp\_4\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0)))))) \tag{8}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_numbers)\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v13\_algstr\_0\ X2)\wedge((v2\_rlvect\_1\ X2)\wedge((v3\_rlvect\_1\ X2)\wedge((v4\_rlvect\_1\ X2)\wedge((v5\_rlvect\_1\ X2)\wedge((v6\_rlvect\_1\ X2)\wedge((v7\_rlvect\_1\ X2)\wedge((v8\_rlvect\_1\ X2)\wedge((v2\_bhsp\_1\ X2)\wedge(l1\_bhsp\_1\ X2))))))))))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ k5\_numbers\ (u1\_struct\_0\ X2))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X2))))))\Rightarrow(\forall X4.((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ k5\_numbers\ (u1\_struct\_0\ X2))\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X2))))))\Rightarrow(r2\_funct\_2\ k5\_numbers\ (u1\_struct\_0\ X2)\ (k6\_bhsp\_1\ X2\ (k5\_normsp\_1\ X2\ (k1\_bhsp\_4\ X2\ X3)\ X0)\ (k5\_normsp\_1\ X2\ (k1\_bhsp\_4\ X2\ X4)\ X1))\ (k1\_bhsp\_4\ X2\ (k6\_bhsp\_1\ X2\ (k5\_normsp\_1\ X2\ X3\ X0)\ (k5\_normsp\_1\ X2\ X4\ X1))))))))$$