t19_hermitan (TMQm9ESzJD8kVqAdvfpyNav76VVsduvJUDU)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_complfld : \iota$ 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 $u1\_struct\_0 : \iota \Rightarrow \iota$ 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 $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_hermitan : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_hahnban1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k2\_complfld : \iota \Rightarrow \iota$ be given. Let $k4\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v36\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l5\_algstr\_0 : \iota \Rightarrow o$ be given. Let $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\neg(v1\_xboole\_0\ X0) \wedge ((X0 \neq X1) \wedge (v1\_xboole\_0\ X1)) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_complfld)) \Rightarrow (k2\_complfld\ (k4\_algstr\_0\ k1\_complfld\ X0) = k4\_algstr\_0\ k1\_complfld\ (k2\_complfld\ X0)) \tag{2}$$

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.

$$(\neg v2\_struct\_0\ k1\_complfld) \wedge (v36\_algstr\_0\ k1\_complfld) \tag{4}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0) \Rightarrow ((l2\_algstr\_0\ X0) \wedge (l5\_algstr\_0\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge(l2\_algstr\_0\ X0))\wedge(((\neg v2\_struct\_0\ X1)\wedge(l1\_vectsp\_1\ X1\ X0))\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))))))))\Rightarrow((v1\_funct\_1\ (k4\_hahnban1\ X0\ X1\ X2))\wedge((v1\_funct\_2\ (k4\_hahnban1\ X0\ X1\ X2)\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ (k4\_hahnban1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))))))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0)\wedge(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge(m1\_subset\_1\ X3\ X0)))\Rightarrow(m1\_subset\_1\ (k3\_funct\_2\ X0\ X1\ X2\ X3)\ X1) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge(l1\_vectsp\_1\ X0\ k1\_complfld))\wedge((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ k1\_complfld))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ k1\_complfld))))))\Rightarrow((v1\_funct\_1\ (k1\_hermitan\ X0\ X1))\wedge((v1\_funct\_2\ (k1\_hermitan\ X0\ X1)\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ k1\_complfld))\wedge(m1\_subset\_1\ (k1\_hermitan\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ k1\_complfld)))))) \tag{8}$$

Assume the following.

$$(v36\_algstr\_0\ k1\_complfld)\wedge(l6\_algstr\_0\ k1\_complfld) \tag{9}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l2\_algstr\_0\ X0))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge(l1\_vectsp\_1\ X1\ X0))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))))))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))))))\Rightarrow((X3 = k4\_hahnban1\ X0\ X1\ X2)\Leftrightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X1))\Rightarrow(k3\_funct\_2\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0)\ X3\ X4 = k4\_algstr\_0\ X0\ (k3\_funct\_2\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0)\ X2\ X4))))))) \tag{10}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_vectsp\_1\ X0\ k1\_complfld))\Rightarrow (\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ k1\_complfld))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ k1\_complfld))))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ k1\_complfld))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ k1\_complfld))))))\Rightarrow((X2 = k1\_hermitan\ X0\ X1)\Leftrightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ k1\_complfld)\ X2\ X3 = k2\_complfld\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ k1\_complfld)\ X1\ X3)))))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_xboole\_0\ X0)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_xboole\_0\ X2)) \tag{12}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_vectsp\_1\ X0\ k1\_complfld))\Rightarrow (\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ k1\_complfld))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ k1\_complfld))))))\Rightarrow(r2\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ k1\_complfld)\ (k1\_hermitan\ X0\ (k4\_hahnban1\ k1\_complfld\ X0\ X1))\ (k4\_hahnban1\ k1\_complfld\ X0\ (k1\_hermitan\ X0\ X1))))$$