t12_groeb_3 (TMUYTuhdPp-pRvNUFCgq8JK829jPmtxWxtAJ)

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Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $v7\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v5\_group\_1 : \iota \Rightarrow o$ be given. Let $v4\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v5\_vectsp\_1 : \iota \Rightarrow o$ 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 $l6\_algstr\_0 : \iota \Rightarrow o$ 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 $k15\_pre\_poly : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $k4\_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_vfunct\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_algstr\_1 : \iota \Rightarrow o$ be given. Let $l2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l5\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v4\_algstr\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v13\_algstr\_0\ X1) \wedge ((v3\_rlvect\_1\ X1) \wedge ((v4\_rlvect\_1\ X1) \wedge (l2\_algstr\_0\ X1))))) \Rightarrow (\forall X2.((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1)))))) \Rightarrow ((r2\_funct\_2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1)\ (k4\_polynom1\ X0\ X1\ (k5\_vfunct\_1\ (k15\_pre\_poly\ X0)\ X1\ X2)\ X2)\ (k7\_polynom1\ X0\ X1)) \wedge (r2\_funct\_2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1)\ (k4\_polynom1\ X0\ X1\ X2\ (k5\_vfunct\_1\ (k15\_pre\_poly\ X0)\ X1\ X2))\ (k7\_polynom1\ X0\ X1))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v1\_algstr\_1\ X1)\wedge (l2\_algstr\_0\ X1)))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow(r2\_funct\_2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1)\ (k4\_polynom1\ X0\ X1\ (k7\_polynom1\ X0\ X1)\ X2)\ X2))$$

(2)

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge (l2\_algstr\_0\ X1)))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow(r2\_funct\_2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1)\ (k4\_polynom1\ X0\ X1\ X2\ (k7\_polynom1\ X0\ X1))\ X2))$$

(3)

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge(l6\_algstr\_0\ X1))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow(\forall X4.((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow(r2\_funct\_2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1)\ (k4\_polynom1\ X0\ X1\ (k4\_polynom1\ X0\ X1\ X2\ X3)\ X4)\ (k4\_polynom1\ X0\ X1\ X2\ (k4\_polynom1\ X0\ X1\ X3\ X4))))))$$

(4)

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X0\ X1)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))\Rightarrow((r2\_funct\_2\ X0\ X1\ X2\ X3)\Rightarrow(r2\_funct\_2\ X0\ X1\ X3\ X2))$$

(5)

Assume the following.

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

(6)

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge(l2\_struct\_0\ X1))\Rightarrow (\exists X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))))\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ (k15\_pre\_poly\ X0))\wedge((v5\_relat\_1\ X2\ (u1\_struct\_0\ X1))\wedge((v1\_funct\_1\ X2)\wedge((\neg v1\_xboole\_0\ X2)\wedge((v1\_partfun1\ X2\ (k15\_pre\_poly\ X0))\wedge((v1\_funct\_2\ X2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))\wedge(v1\_polynom1\ X2\ (k15\_pre\_poly\ X0)\ X1)))))))))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\exists X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ X0)\wedge((v5\_relat\_1\ X2\ X1)\wedge((v1\_funct\_1\ X2)\wedge(v1\_funct\_2\ X2\ X0\ X1))))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge(((\neg v2\_struct\_0\ X1)\wedge(l2\_algstr\_0\ X1))\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ (u1\_struct\_0\ X1))))))))\Rightarrow((v1\_funct\_1\ (k5\_vfunct\_1\ X0\ X1\ X2))\wedge(v1\_partfun1\ (k5\_vfunct\_1\ X0\ X1\ X2)\ X0)) \tag{9}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0)\Rightarrow((l2\_algstr\_0\ X0)\wedge(l5\_algstr\_0\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.(l2\_struct\_0\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{11}$$

Assume the following.

$$\forall X0.(l2\_algstr\_0\ X0)\Rightarrow((l2\_struct\_0\ X0)\wedge(l1\_algstr\_0\ X0)) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge(l2\_struct\_0\ X1))\Rightarrow ((v1\_funct\_1\ (k7\_polynom1\ X0\ X1))\wedge((v1\_funct\_2\ (k7\_polynom1\ X0\ X1)\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ (k7\_polynom1\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1)))))) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge(l2\_algstr\_0\ X1)))))\wedge(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))))))\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1)))))))\Rightarrow((v1\_funct\_1\ (k6\_polynom1\ X0\ X1\ X2\ X3))\wedge((v1\_funct\_2\ (k6\_polynom1\ X0\ X1\ X2\ X3)\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ (k6\_polynom1\ X0\ X1\ X2\ X3)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))))))) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge(((\neg v2\_struct\_0\ X1)\wedge(l2\_algstr\_0\ X1))\wedge((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ (u1\_struct\_0\ X1)))))))\Rightarrow((v1\_funct\_1\ (k5\_vfunct\_1\ X0\ X1\ X2))\wedge(m1\_subset\_1\ (k5\_vfunct\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ (u1\_struct\_0\ X1))))) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge(l2\_algstr\_0\ X1)))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1)))))))\Rightarrow(k6\_polynom1\ X0\ X1\ X2\ X3 = k4\_polynom1\ X0\ X1\ X2\ (k5\_vfunct\_1\ (k15\_pre\_poly\ X0)\ X1\ X3)))) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(\neg v1\_xboole\_0\ X1))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(((v1\_funct\_1\ X2)\wedge(v1\_funct\_2\ X2\ X0\ X1))\Rightarrow((v1\_funct\_1\ X2)\wedge((\neg v1\_xboole\_0\ X2)\wedge(v1\_funct\_2\ X2\ X0\ X1))))) \tag{17}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_xboole\_0\ X0)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X0)))\Rightarrow(v1\_xboole\_0\ X2)) \tag{18}$$

Assume the following.

$$\forall X0.(l2\_algstr\_0\ X0)\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge(v4\_rlvect\_1\ X0))))\Rightarrow((\neg v2\_struct\_0\ X0)\wedge((v1\_algstr\_1\ X0)\wedge(v4\_algstr\_1\ X0)))) \tag{19}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_xboole\_0\ X0)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_xboole\_0\ X2)) \tag{20}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v1\_partfun1\ X2\ X0)\Rightarrow(v1\_funct\_2\ X2\ X0\ X1)) \tag{21}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(v1\_funct\_1\ X0) \tag{22}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow((\neg v7\_struct\_0\ X0)\Rightarrow(\neg v2\_struct\_0\ X0)) \tag{23}$$

Theorem 1

$$\forall X0.(v3\_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v7\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v5\_group\_1\ X1)\wedge((v4\_vectsp\_1\ X1)\wedge((v5\_vectsp\_1\ X1)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge(l6\_algstr\_0\ X1))))))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))\wedge((v1\_polynom1\ X2\ (k15\_pre\_poly\ X0)\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1)))))))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1))\wedge((v1\_polynom1\ X3\ (k15\_pre\_poly\ X0)\ X1)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1)))))))\Rightarrow((r2\_funct\_2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1)\ (k6\_polynom1\ X0\ X1\ X2\ X3)\ (k7\_polynom1\ X0\ X1))\Rightarrow(r2\_funct\_2\ (k15\_pre\_poly\ X0)\ (u1\_struct\_0\ X1)\ X2\ X3)))))$$