t117_group_2 (TMNX7BN3FqbwPTvj39qkRK7ZaCn3ef36iy9)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_group\_1 : \iota \Rightarrow o$ be given. Let $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $l3\_algstr\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_group\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_group\_1 : \iota \Rightarrow \iota$ be given. Let $k14\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow ((k6\_algstr\_0\ X0\ X1\ X2 = k6\_algstr\_0\ X0\ X2\ X1) \Leftrightarrow (k6\_algstr\_0\ X0\ X1\ (k2\_group\_1\ X0\ X2) = k6\_algstr\_0\ X0\ (k2\_group\_1\ X0\ X2)\ X1)))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_group\_2\ X3\ X0) \Rightarrow (r1\_tarski\ (k13\_group\_2\ X0\ X3\ (k6\_algstr\_0\ X0\ X1\ X2))\ (k2\_group\_2\ X0\ (k13\_group\_2\ X0\ X3\ X1)\ (k13\_group\_2\ X0\ X3\ X2))))))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \Rightarrow (\forall X1.(m1\_group\_2\ X1\ X0) \Rightarrow ((k13\_group\_2\ X0\ X1\ (k1\_group\_1\ X0) = k8\_group\_2\ X0\ X1) \wedge (k14\_group\_2\ X0\ X1\ (k1\_group\_1\ X0) = k8\_group\_2\ X0\ X1))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)))\Rightarrow(m1\_subset\_1\ (k2\_group\_1\ X0\ X1)\ (u1\_struct\_0\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow((X2 = k2\_group\_1\ X0\ X1)\Leftrightarrow((k6\_algstr\_0\ X0\ X1\ X2 = k1\_group\_1\ X0)\wedge(k6\_algstr\_0\ X0\ X2\ X1 = k1\_group\_1\ X0))))) \tag{5}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_group\_2\ X2\ X0)\Rightarrow((r1\_tarski\ (k8\_group\_2\ X0\ X2)\ (k2\_group\_2\ X0\ (k13\_group\_2\ X0\ X2\ X1)\ (k13\_group\_2\ X0\ X2\ (k2\_group\_1\ X0\ X1))))\wedge(r1\_tarski\ (k8\_group\_2\ X0\ X2)\ (k2\_group\_2\ X0\ (k13\_group\_2\ X0\ X2\ (k2\_group\_1\ X0\ X1))\ (k13\_group\_2\ X0\ X2\ X1))))))$$