t27_weddwitt (TMP5RuS7UaQLUzqYTt8dTovwWgxTwoigRab)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v6\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v33\_algstr\_0 : \iota \Rightarrow o$ 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 $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $v4\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v5\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_weddwitt : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_group\_1 : \iota \Rightarrow \iota$ be given. Let $l4\_algstr\_0 : \iota \Rightarrow o$ be given. Let $k5\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l5\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l4\_struct\_0 : \iota \Rightarrow o$ be given. Let $l3\_struct\_0 : \iota \Rightarrow o$ be given. Let $l3\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v36\_algstr\_0 : \iota \Rightarrow o$ be given. Let $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_realset1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2\_algstr\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v4\_vectsp\_1\ X0) \wedge (l4\_algstr\_0\ X0))) \Rightarrow (k1\_group\_1\ X0 = k5\_struct\_0\ X0) \tag{1}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0) \Rightarrow ((l2\_algstr\_0\ X0) \wedge (l5\_algstr\_0\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.(l5\_algstr\_0\ X0) \Rightarrow ((l4\_algstr\_0\ X0) \wedge (l4\_struct\_0\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.(l4\_algstr\_0\ X0) \Rightarrow ((l3\_struct\_0\ X0) \wedge (l3\_algstr\_0\ X0)) \tag{4}$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v33\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)))\Rightarrow((\neg v2\_struct\_0\ (k5\_weddwitt\ X0\ X1))\wedge((\neg v6\_struct\_0\ (k5\_weddwitt\ X0\ X1))\wedge((v13\_algstr\_0\ (k5\_weddwitt\ X0\ X1))\wedge((v33\_algstr\_0\ (k5\_weddwitt\ X0\ X1))\wedge((v36\_algstr\_0\ (k5\_weddwitt\ X0\ X1))\wedge((v2\_rlvect\_1\ (k5\_weddwitt\ X0\ X1))\wedge((v3\_rlvect\_1\ (k5\_weddwitt\ X0\ X1))\wedge((v4\_rlvect\_1\ (k5\_weddwitt\ X0\ X1))\wedge((v3\_group\_1\ (k5\_weddwitt\ X0\ X1))\wedge((v4\_vectsp\_1\ (k5\_weddwitt\ X0\ X1))\wedge((v5\_vectsp\_1\ (k5\_weddwitt\ X0\ X1))\wedge(l6\_algstr\_0\ (k5\_weddwitt\ X0\ X1)))))))))))) \tag{6}$$

Assume the following.

$$\forall X0.(l2\_struct\_0\ X0)\Rightarrow(m1\_subset\_1\ (k4\_struct\_0\ X0)\ (u1\_struct\_0\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(l3\_algstr\_0\ X0)\Rightarrow(m1\_subset\_1\ (k1\_group\_1\ X0)\ (u1\_struct\_0\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v33\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((\neg v6\_struct\_0\ X2)\wedge((v13\_algstr\_0\ X2)\wedge((v33\_algstr\_0\ X2)\wedge((v36\_algstr\_0\ X2)\wedge((v2\_rlvect\_1\ X2)\wedge((v3\_rlvect\_1\ X2)\wedge((v4\_rlvect\_1\ X2)\wedge((v3\_group\_1\ X2)\wedge((v4\_vectsp\_1\ X2)\wedge((v5\_vectsp\_1\ X2)\wedge(l6\_algstr\_0\ X2))))))))))\Rightarrow((X2=k5\_weddwitt\ X0\ X1)\Leftrightarrow((u1\_struct\_0\ X2=ReplSep\ (toset\ (\lambda X3:\iota.m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)))\ (\lambda X3:\iota.k6\_algstr\_0\ X0\ X3\ X1=k6\_algstr\_0\ X0\ X1\ X3)\ (\lambda X3:\iota.X3))\wedge((u1\_algstr\_0\ X2=k1\_realset1\ (u1\_algstr\_0\ X0)\ (u1\_struct\_0\ X2))\wedge((u2\_algstr\_0\ X2=k1\_realset1\ (u2\_algstr\_0\ X0)\ (u1\_struct\_0\ X2))\wedge((k4\_struct\_0\ X2=k4\_struct\_0\ X0)\wedge(k5\_struct\_0\ X2=k5\_struct\_0\ X0))))))))) \tag{9}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v33\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow((m1\_subset\_1\ (k4\_struct\_0\ X0)\ (u1\_struct\_0\ (k5\_weddwitt\ X0\ X1)))\wedge(m1\_subset\_1\ (k1\_group\_1\ X0)\ (u1\_struct\_0\ (k5\_weddwitt\ X0\ X1)))))$$