

## t39\_weddwitt

(TMJkNsqYk17rie1oUhWYQzAC4M8GtrohpA2)

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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  $k5\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_weddwitt : \iota \Rightarrow \iota$  be given. Let  $v36\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v5\_group\_1 : \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  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. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\
 & X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge \\
 & ((v4\_rlvect\_1 X0) \wedge ((v3\_group\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 \\
 & X0) \wedge (l6\_algstr\_0 X0)))))))))) \Rightarrow ((\neg v2\_struct\_0 (k4\_weddwitt \\
 & X0)) \wedge ((\neg v6\_struct\_0 (k4\_weddwitt X0)) \wedge ((v13\_algstr\_0 (k4\_weddwitt \\
 & X0)) \wedge ((v33\_algstr\_0 (k4\_weddwitt X0)) \wedge ((v36\_algstr\_0 (k4\_weddwitt \\
 & X0)) \wedge ((v2\_rlvect\_1 (k4\_weddwitt X0)) \wedge ((v3\_rlvect\_1 (k4\_weddwitt \\
 & X0)) \wedge ((v4\_rlvect\_1 (k4\_weddwitt X0)) \wedge ((v3\_group\_1 (k4\_weddwitt \\
 & X0)) \wedge ((v5\_group\_1 (k4\_weddwitt X0)) \wedge ((v4\_vectsp\_1 (k4\_weddwitt \\
 & X0)) \wedge ((v5\_vectsp\_1 (k4\_weddwitt X0)) \wedge (l6\_algstr\_0 (k4\_weddwitt \\
 & X0))))))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\
& X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge \\
& ((v4\_rlvect\_1 X0) \wedge ((v3\_group\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 \\
& X0) \wedge (l6\_algstr\_0 X0)))))))))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 \\
& X1) \wedge ((\neg v6\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v33\_algstr\_0 X1) \wedge \\
& ((v36\_algstr\_0 X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 \\
& X1) \wedge ((v3\_group\_1 X1) \wedge ((v5\_group\_1 X1) \wedge ((v4\_vectsp\_1 X1) \wedge (( \\
& v5\_vectsp\_1 X1) \wedge (l6\_algstr\_0 X1)))))))))) \Rightarrow ((X1 = k4\_weddwitt \\
& X0) \Leftrightarrow ((u1\_struct\_0 X1 = ReplSep (toset (\lambda X2 : \iota.m1\_subset\_1 \\
& X2 (u1\_struct\_0 X0))) (\lambda X2 : \iota.\forall X3.(m1\_subset\_1 X3 \\
& (u1\_struct\_0 X0)) \Rightarrow (k6\_algstr\_0 X0 X2 X3 = k6\_algstr\_0 X0 X3 X2)) \\
& (\lambda X2 : \iota.X2)) \wedge ((u1\_algstr\_0 X1 = k1\_realset1 (u1\_algstr\_0 \\
& X0) (u1\_struct\_0 X1)) \wedge ((u2\_algstr\_0 X1 = k1\_realset1 (u2\_algstr\_0 \\
& X0) (u1\_struct\_0 X1)) \wedge ((k4\_struct\_0 X1 = k4\_struct\_0 X0) \wedge (k5\_struct\_0 \\
& X1 = k5\_struct\_0 X0))))))
\end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\
& X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge \\
& ((v4\_rlvect\_1 X0) \wedge ((v3\_group\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 \\
& X0) \wedge (l6\_algstr\_0 X0)))))))))) \Rightarrow (k5\_struct\_0 (k4\_weddwitt X0) = \\
& k5\_struct\_0 X0)
\end{aligned}$$