

# t32\_weddwitt

(TMVkBbBi2ev8PD5zrbsUib2bJsmNNxs1vaHf)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v6\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v8\_struct\_0 : \iota \Rightarrow o$  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  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_vectsp\_9 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_weddwitt : \iota \Rightarrow \iota$  be given. Let  $k6\_weddwitt : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k7\_group\_1 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k4\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_newton : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_uniroots : \iota \Rightarrow \iota$  be given. Let  $k21\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_0 : \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v36\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v5\_group\_1 : \iota \Rightarrow o$  be given. Let  $v15\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v2\_group\_1 : \iota \Rightarrow o$  be given. Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l5\_algstr\_0 : \iota \Rightarrow o$  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  $v7\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v8\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v9\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v10\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v11\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Rightarrow ((v1\_xboole\_0 X0) \vee ((v2\_xxreal\_0 X1) \vee (v3\_xxreal\_0 X0)))))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\neg(r1\_xxreal\_0 X0 X1) \wedge (\neg v2\_xxreal\_0 X1) \wedge (v2\_xxreal\_0 X0)))) \quad (3)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v8\_struct\_0 X0) \wedge (l1\_struct\_0 X0))) \Rightarrow (r1\_xxreal\_0 np\_1 (k7\_group\_1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (k4\_prepower X0 X1 = k1\_newton X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (k4\_prepower X0 k6\_numbers = np\_1) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v8\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v3\_group\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0)))))))))) \Rightarrow (k5\_card\_1 (u1\_struct\_0 X0) = k1\_newton (k5\_card\_1 (u1\_struct\_0 (k4\_weddwitt X0))) (k1\_vectsp\_9 (k4\_weddwitt X0) (k6\_weddwitt X0))) \quad (7) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v8\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v3\_group\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l6\_algstr\_0 X0)))))))))) \Rightarrow (k7\_group\_1 (k1\_uniroots X0) = k21\_binop\_2 (k7\_group\_1 X0) np\_1) \quad (8) \end{aligned}$$

Assume the following.

$$\begin{aligned} ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \quad (9) \end{aligned}$$

Assume the following.

$$v1\_xboole\_0 np\_0 \quad (10)$$

Assume the following.

$$k4\_xcmplx\_0 np\_0 = np\_0 \quad (11)$$

Assume the following.

$$k6\_xcmplx\_0 np\_1 np\_1 = np\_0 \quad (12)$$

Assume the following.

$$\forall X0.((v8\_struct\_0 X0)\wedge(l1\_struct\_0 X0))\Rightarrow(k7\_group\_1 X0 = k7\_struct\_0 X0) \quad (13)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (14)$$

Assume the following.

$$\forall X0.(v1\_finset\_1 X0)\Rightarrow(k5\_card\_1 X0 = k1\_card\_1 X0) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_int\_1 X0)\wedge(v1\_int\_1 X1))\Rightarrow(k21\_binop\_2 X0 X1 = k6\_xcmplx\_0 X0 X1) \quad (16)$$

Assume the following.

$$\exists X0.(v1\_xboole\_0 X0)\wedge((v1\_xcmplx\_0 X0)\wedge((v1\_xxreal\_0 X0)\wedge(v1\_xreal\_0 X0))) \quad (17)$$

Assume the following.

$$\forall X0.((v8\_struct\_0 X0)\wedge(l1\_struct\_0 X0))\Rightarrow(v1\_finset\_1 (u1\_struct\_0 X0)) \quad (18)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0)\wedge((\neg v6\_struct\_0 X0)\wedge((v8\_struct\_0 X0)\wedge((v13\_algstr\_0 X0)\wedge((v33\_algstr\_0 X0)\wedge((v2\_rlvect\_1 X0)\wedge((v3\_rlvect\_1 X0)\wedge((v4\_rlvect\_1 X0)\wedge((v3\_group\_1 X0)\wedge((v4\_vectsp\_1 X0)\wedge((v5\_vectsp\_1 X0)\wedge(l6\_algstr\_0 X0))))))))))\Rightarrow((\neg v2\_struct\_0 (k4\_weddwitt X0))\wedge((\neg v6\_struct\_0 (k4\_weddwitt X0))\wedge((v8\_struct\_0 (k4\_weddwitt X0))\wedge((v13\_algstr\_0 (k4\_weddwitt X0))\wedge((v33\_algstr\_0 (k4\_weddwitt X0))\wedge((v36\_algstr\_0 (k4\_weddwitt X0))\wedge((v2\_rlvect\_1 (k4\_weddwitt X0))\wedge((v3\_rlvect\_1 (k4\_weddwitt X0))\wedge((v4\_rlvect\_1 (k4\_weddwitt X0))\wedge((v3\_group\_1 (k4\_weddwitt X0))\wedge((v5\_group\_1 (k4\_weddwitt X0))\wedge((v4\_vectsp\_1 (k4\_weddwitt X0))\wedge(v5\_vectsp\_1 (k4\_weddwitt X0)))))))))))))) \end{aligned} \quad (19)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0)\wedge((\neg v6\_struct\_0 X0)\wedge((v8\_struct\_0 X0)\wedge((v13\_algstr\_0 X0)\wedge((v33\_algstr\_0 X0)\wedge((v3\_group\_1 X0)\wedge((v4\_vectsp\_1 X0)\wedge((v5\_vectsp\_1 X0)\wedge((v2\_rlvect\_1 X0)\wedge((v3\_rlvect\_1 X0)\wedge((v4\_rlvect\_1 X0)\wedge(l6\_algstr\_0 X0))))))))))\Rightarrow((\neg v2\_struct\_0 (k1\_uniroots X0))\wedge((v8\_struct\_0 (k1\_uniroots X0))\wedge((v15\_algstr\_0 (k1\_uniroots X0))\wedge((v2\_group\_1 (k1\_uniroots X0))\wedge(v3\_group\_1 (k1\_uniroots X0)))))) \end{aligned} \quad (20)$$

Assume the following.

$$\forall X0.((v8\_struct\_0 X0)\wedge(l1\_struct\_0 X0))\Rightarrow((v7\_ordinal1 (k7\_struct\_0 X0))\wedge(v1\_card\_1 (k7\_struct\_0 X0))) \quad (21)$$

Assume the following.

$$\forall X0.((\neg v3\_xreal\_0 X0)\wedge(v1\_xreal\_0 X0))\Rightarrow((v1\_xcmplx\_0 (k4\_xcmplx\_0 X0))\wedge(\neg v2\_xreal\_0 (k4\_xcmplx\_0 X0))) \quad (22)$$

Assume the following.

$$\forall X0.(l6\_algstr\_0 X0)\Rightarrow((l2\_algstr\_0 X0)\wedge(l5\_algstr\_0 X0)) \quad (23)$$

Assume the following.

$$\forall X0.(l3\_algstr\_0 X0)\Rightarrow(l1\_struct\_0 X0) \quad (24)$$

Assume the following.

$$\forall X0.(l2\_algstr\_0 X0)\Rightarrow((l2\_struct\_0 X0)\wedge(l1\_algstr\_0 X0)) \quad (25)$$

Assume the following.

$$\forall X0.(l1\_algstr\_0 X0)\Rightarrow(l1\_struct\_0 X0) \quad (26)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0)\wedge((\neg v6\_struct\_0 X0)\wedge((v13\_algstr\_0 X0)\wedge((v33\_algstr\_0 X0)\wedge((v2\_rlvect\_1 X0)\wedge((v3\_rlvect\_1 X0)\wedge \\ ((v4\_rlvect\_1 X0)\wedge((v3\_group\_1 X0)\wedge((v4\_vectsp\_1 X0)\wedge((v5\_vectsp\_1 X0)\wedge(l6\_algstr\_0 X0))))))))))\Rightarrow((\neg v2\_struct\_0 (k6\_weddwitt X0))\wedge((v13\_algstr\_0 (k6\_weddwitt X0))\wedge((v2\_rlvect\_1 (k6\_weddwitt X0))\wedge((v3\_rlvect\_1 (k6\_weddwitt X0))\wedge((v4\_rlvect\_1 (k6\_weddwitt X0))\wedge((v7\_vectsp\_1 (k6\_weddwitt X0) (k4\_weddwitt X0))\wedge((v8\_vectsp\_1 (k6\_weddwitt X0) (k4\_weddwitt X0))\wedge((v9\_vectsp\_1 (k6\_weddwitt X0) (k4\_weddwitt X0))\wedge((v10\_vectsp\_1 (k6\_weddwitt X0) (k4\_weddwitt X0))\wedge((v11\_vectsp\_1 (k6\_weddwitt X0) (k4\_weddwitt X0))\wedge(l1\_vectsp\_1 (k6\_weddwitt X0) (k4\_weddwitt X0)))))))))))))) \quad (27) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0)\wedge((\neg v6\_struct\_0 X0)\wedge((v13\_algstr\_0 X0)\wedge((v33\_algstr\_0 X0)\wedge((v2\_rlvect\_1 X0)\wedge((v3\_rlvect\_1 X0)\wedge \\ ((v4\_rlvect\_1 X0)\wedge((v3\_group\_1 X0)\wedge((v4\_vectsp\_1 X0)\wedge((v5\_vectsp\_1 X0)\wedge(l6\_algstr\_0 X0))))))))))\Rightarrow((\neg v2\_struct\_0 (k4\_weddwitt X0))\wedge((\neg v6\_struct\_0 (k4\_weddwitt X0))\wedge((v13\_algstr\_0 (k4\_weddwitt X0))\wedge((v33\_algstr\_0 (k4\_weddwitt X0))\wedge((v36\_algstr\_0 (k4\_weddwitt X0))\wedge((v2\_rlvect\_1 (k4\_weddwitt X0))\wedge((v3\_rlvect\_1 (k4\_weddwitt X0))\wedge((v4\_rlvect\_1 (k4\_weddwitt X0))\wedge((v3\_group\_1 (k4\_weddwitt X0))\wedge((v5\_group\_1 (k4\_weddwitt X0))\wedge((v4\_vectsp\_1 (k4\_weddwitt X0))\wedge((v5\_vectsp\_1 (k4\_weddwitt X0))\wedge(l6\_algstr\_0 (k4\_weddwitt X0)))))))))))))) \quad (28) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (\neg v6\_struct\_0 X0) \wedge \\ & ((v13\_algstr\_0 X0) \wedge (v33\_algstr\_0 X0) \wedge (v3\_group\_1 X0) \wedge (v5\_group\_1 \\ & X0) \wedge (v4\_vectsp\_1 X0) \wedge (v5\_vectsp\_1 X0) \wedge (v2\_rlvect\_1 X0) \wedge \\ & ((v3\_rlvect\_1 X0) \wedge (v4\_rlvect\_1 X0) \wedge (l6\_algstr\_0 X0)))))) \wedge \\ & ((\neg v2\_struct\_0 X1) \wedge (v13\_algstr\_0 X1) \wedge (v8\_vectsp\_1 X1 X0) \wedge \\ & (v9\_vectsp\_1 X1 X0) \wedge (v10\_vectsp\_1 X1 X0) \wedge (v11\_vectsp\_1 X1 \\ & X0) \wedge (v2\_rlvect\_1 X1) \wedge (v3\_rlvect\_1 X1) \wedge (v4\_rlvect\_1 X1) \wedge \\ & (l1\_vectsp\_1 X1 X0)))))) \Rightarrow (v7\_ordinal1 (k1\_vectsp\_9 X0 X1)) \end{aligned} \quad (29)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\ & X0) \wedge (v33\_algstr\_0 X0) \wedge (v3\_group\_1 X0) \wedge (v4\_vectsp\_1 X0) \wedge \\ & (v5\_vectsp\_1 X0) \wedge (v2\_rlvect\_1 X0) \wedge (v3\_rlvect\_1 X0) \wedge (v4\_rlvect\_1 \\ & X0) \wedge (l6\_algstr\_0 X0)))))) \Rightarrow ((\neg v2\_struct\_0 (k1\_uniroots \\ & X0)) \wedge (v15\_algstr\_0 (k1\_uniroots X0)) \wedge (v2\_group\_1 (k1\_uniroots \\ & X0)) \wedge (v3\_group\_1 (k1\_uniroots X0)) \wedge (l3\_algstr\_0 (k1\_uniroots \\ & X0)))) \end{aligned} \quad (30)$$

Assume the following.

$$\forall X0. (l1\_struct\_0 X0) \Rightarrow (k7\_struct\_0 X0 = k1\_card\_1 (u1\_struct\_0 X0)) \quad (31)$$

Assume the following.

$$\forall X0. ((v1\_xxreal\_0 X0) \wedge (v2\_xxreal\_0 X0)) \Rightarrow ((\neg v1\_xboole\_0 X0) \wedge ((v1\_xxreal\_0 X0) \wedge (\neg v3\_xxreal\_0 X0))) \quad (32)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow ((v7\_ordinal1 X0) \wedge (\neg v3\_xxreal\_0 X0)) \quad (33)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (v1\_xreal\_0 X0) \quad (34)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (v1\_int\_1 X0) \quad (35)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (\neg v6\_struct\_0 X0) \wedge (v8\_struct\_0 \\ & X0) \wedge (v13\_algstr\_0 X0) \wedge (v33\_algstr\_0 X0) \wedge (v2\_rlvect\_1 X0) \wedge \\ & ((v3\_rlvect\_1 X0) \wedge (v4\_rlvect\_1 X0) \wedge (v3\_group\_1 X0) \wedge (v4\_vectsp\_1 \\ & X0) \wedge (v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0)))))) \Rightarrow (\neg r1\_xxreal\_0 \\ & (k1\_vectsp\_9 (k4\_weddwitt X0) (k6\_weddwitt X0)) k6\_numbers) \end{aligned}$$