

# t13\_groeb\_1

## (TMPoQ3gpqwXteHams1xTySfBmjAz4RyxZ1y)

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Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k15\_pre\_poly : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v6\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v8\_relat\_2 : \iota \Rightarrow o$  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  $v7\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v33\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v3\_group\_1 : \iota \Rightarrow o$  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  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k11\_polynom1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_rewrite1 : \iota \Rightarrow o$  be given. Let  $k3\_polyred : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_rewrite1 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k8\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v8\_rewrite1 : \iota \Rightarrow o$  be given. Let  $v5\_rewrite1 : \iota \Rightarrow o$  be given. Let  $v9\_rewrite1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. v1\_relat\_1 (k2\_zfmisc\_1 X0 X1) \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v3\_ordinal1 X0) \wedge \\ & (((v1\_partfun1 X1 (k15\_pre\_poly X0)) \wedge ((v1\_relat\_2 X1) \wedge ((v4\_relat\_2 \\ & X1) \wedge ((v6\_relat\_2 X1) \wedge ((v8\_relat\_2 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (k15\_pre\_poly X0) (k15\_pre\_poly X0)))))))))) \wedge (( \\ & (\neg v7\_struct\_0 X2) \wedge ((v13\_algstr\_0 X2) \wedge ((v33\_algstr\_0 X2) \wedge (( \\ & v3\_group\_1 X2) \wedge ((v5\_group\_1 X2) \wedge ((v4\_vectsp\_1 X2) \wedge ((v5\_vectsp\_1 \\ & X2) \wedge ((v3\_rlvect\_1 X2) \wedge ((v4\_rlvect\_1 X2) \wedge (l6\_algstr\_0 X2)))))))))) \wedge \\ & (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 (k11\_polynom1 X0 X2)))))) \Rightarrow \\ & (m1\_subset\_1 (k3\_polyred X0 X1 X2 X3) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (k8\_struct\_0 (k11\_polynom1 X0 X2)) (u1\_struct\_0 (k11\_polynom1 \\ & X0 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v8\_rewrite1 X0)) \Rightarrow ((v1\_relat\_1 X0) \wedge (v5\_rewrite1 X0)) \tag{3}$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v7\_rewrite1 X0)) \Rightarrow ((v1\_relat\_1 X0) \wedge ((v8\_rewrite1 X0) \wedge (v9\_rewrite1 X0))) \quad (4)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (v1\_relat\_1 X1)) \quad (5)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v5\_rewrite1 X0)) \Rightarrow ((v1\_relat\_1 X0) \wedge (v4\_rewrite1 X0)) \quad (6)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.((v1\_partfun1 X1 (k15\_pre\_poly X0)) \wedge ((v1\_relat\_2 X1) \wedge ((v4\_relat\_2 X1) \wedge ((v6\_relat\_2 X1) \wedge ((v8\_relat\_2 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k15\_pre\_poly X0) (k15\_pre\_poly X0)))))))))) \Rightarrow (\forall X2.((\neg v7\_struct\_0 X2) \wedge ((v13\_algstr\_0 X2) \wedge ((v33\_algstr\_0 X2) \wedge ((v3\_group\_1 X2) \wedge ((v5\_group\_1 X2) \wedge ((v4\_vectsp\_1 X2) \wedge ((v5\_vectsp\_1 X2) \wedge ((v3\_rlvect\_1 X2) \wedge ((v4\_rlvect\_1 X2) \wedge (l6\_algstr\_0 X2)))))))))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 (k11\_polynom1 X0 X2)))) \Rightarrow ((v7\_rewrite1 (k3\_polyred X0 X1 X2 X3)) \Rightarrow (v4\_rewrite1 (k3\_polyred X0 X1 X2 X3)))))) \end{aligned}$$