

# t36\_polyform

(TMG9U7rv4VNFtcixMf9W6P1turZtjyz8Ssv)

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Let  $v2\_polyform : \iota \Rightarrow o$  be given. Let  $v3\_polyform : \iota \Rightarrow o$  be given. Let  $v4\_polyform : \iota \Rightarrow o$  be given. Let  $l1\_polyform : \iota \Rightarrow o$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $k11\_polyform : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_vectsp\_9 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_bspace : \iota$  be given. Let  $k17\_polyform : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_bspace : \iota \Rightarrow \iota$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $m1\_vectsp\_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_bspace : \iota \Rightarrow \iota$  be given. Let  $k5\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_matrlin : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  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  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $k8\_polyform : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l1\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v6\_struct\_0 : \iota \Rightarrow o$  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  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. k1\_card\_1 (k9\_bspace X0) = k1\_card\_1 X0 \quad (1)$$

Assume the following.

$$\forall X0. (v1\_finset\_1 X0) \Rightarrow (m1\_vectsp\_7 (k9\_bspace X0) k2\_bspace (k7\_bspace X0)) \quad (2)$$

Assume the following.

$$\forall X0. (v1\_finset\_1 X0) \Rightarrow (k5\_card\_1 X0 = k1\_card\_1 X0) \quad (3)$$

Assume the following.

$$\forall X0. (v1\_finset\_1 X0) \Rightarrow ((\neg v2\_struct\_0 (k7\_bspace X0)) \wedge (v1\_matrlin (k7\_bspace X0) k2\_bspace)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v2\_struct\_0 (k7\_bspace X0)) \wedge ((v13\_algstr\_0 (k7\_bspace \\ & X0)) \wedge ((v8\_vectsp\_1 (k7\_bspace X0) k2\_bspace) \wedge ((v9\_vectsp\_1 \\ & (k7\_bspace X0) k2\_bspace) \wedge ((v10\_vectsp\_1 (k7\_bspace X0) k2\_bspace) \wedge \\ & ((v11\_vectsp\_1 (k7\_bspace X0) k2\_bspace) \wedge ((v2\_rlvect\_1 (k7\_bspace \\ & X0)) \wedge ((v3\_rlvect\_1 (k7\_bspace X0)) \wedge (v4\_rlvect\_1 (k7\_bspace \\ & X0)))))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v2\_polyform X0) \wedge ((v3\_polyform X0) \wedge \\ & ((v4\_polyform X0) \wedge (l1\_polyform X0)))) \wedge (v1\_int\_1 X1)) \Rightarrow (v1\_finset\_1 \\ & (k8\_polyform X0 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v2\_struct\_0 (k7\_bspace X0)) \wedge (l1\_vectsp\_1 (k7\_bspace \\ & X0) k2\_bspace) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & (\neg v2\_struct\_0 k2\_bspace) \wedge ((\neg v6\_struct\_0 k2\_bspace) \wedge ((v13\_algstr\_0 \\ & k2\_bspace) \wedge ((v33\_algstr\_0 k2\_bspace) \wedge ((v3\_group\_1 k2\_bspace) \wedge \\ & ((v5\_group\_1 k2\_bspace) \wedge ((v4\_vectsp\_1 k2\_bspace) \wedge ((v5\_vectsp\_1 \\ & k2\_bspace) \wedge ((v2\_rlvect\_1 k2\_bspace) \wedge ((v3\_rlvect\_1 k2\_bspace) \wedge \\ & ((v4\_rlvect\_1 k2\_bspace) \wedge (l6\_algstr\_0 k2\_bspace)))))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge \\ & ((v13\_algstr\_0 X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v3\_group\_1 X0) \wedge ((v5\_group\_1 \\ & X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge ((v2\_rlvect\_1 X0) \wedge \\ & ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l6\_algstr\_0 X0)))))))))) \wedge \\ & ((\neg v2\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v8\_vectsp\_1 X1 X0) \wedge \\ & ((v9\_vectsp\_1 X1 X0) \wedge ((v10\_vectsp\_1 X1 X0) \wedge ((v11\_vectsp\_1 X1 \\ & X0) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge \\ & (l1\_vectsp\_1 X1 X0)))))))))) \Rightarrow (v7\_ordinal1 (k1\_vectsp\_9 X0 X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v2\_polyform X0) \wedge ((v3\_polyform X0) \wedge ((v4\_polyform \\ & X0) \wedge (l1\_polyform X0)))) \Rightarrow (\forall X1. (v1\_int\_1 X1) \Rightarrow (k11\_polyform \\ & X0 X1 = k5\_card\_1 (k8\_polyform X0 X1))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\
& X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v3\_group\_1 X0) \wedge ((v5\_group\_1 X0) \wedge \\
& (v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 \\
& X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l6\_algstr\_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((\neg v2\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v8\_vectsp\_1 X1 X0) \wedge \\
& ((v9\_vectsp\_1 X1 X0) \wedge ((v10\_vectsp\_1 X1 X0) \wedge ((v11\_vectsp\_1 X1 \\
& X0) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge \\
& (l1\_vectsp\_1 X1 X0)))))))))) \Rightarrow ((v1\_matrlin X1 X0) \Rightarrow (\forall X2. \\
& (v7\_ordinal1 X2) \Rightarrow ((X2 = k1\_vectsp\_9 X0 X1) \Leftrightarrow (\forall X3. (m1\_vectsp\_7 \\
& X3 X0 X1) \Rightarrow (X2 = k1\_card\_1 X3))))))
\end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2\_polyform X0) \wedge ((v3\_polyform X0) \wedge ((v4\_polyform \\
& X0) \wedge (l1\_polyform X0)))) \Rightarrow (\forall X1. (v1\_int\_1 X1) \Rightarrow (k17\_polyform \\
& X0 X1 = k7\_bspace (k8\_polyform X0 X1)))
\end{aligned} \tag{12}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((v2\_polyform X0) \wedge ((v3\_polyform X0) \wedge ((v4\_polyform \\
& X0) \wedge (l1\_polyform X0)))) \Rightarrow (\forall X1. (v1\_int\_1 X1) \Rightarrow (k11\_polyform \\
& X0 X1 = k1\_vectsp\_9 k2\_bspace (k17\_polyform X0 X1)))
\end{aligned}$$