

# t27\_int\_7 (TMKXMoTvPiLZRgNrnzBt- FqGpH2ocnpGLdGe)

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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  $v5\_group\_1 : \iota \Rightarrow o$  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  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_algseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  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  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k2\_hurwitz : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $k6\_polynom5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_uproots : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k5\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_vectsp\_2 : \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l1\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v1\_algstr\_1 : \iota \Rightarrow o$  be given. Let  $v4\_algstr\_1 : \iota \Rightarrow o$  be given. Let  $v1\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v2\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v2\_algstr\_1 : \iota \Rightarrow o$  be given. Let  $v3\_algstr\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_int\_1 X0) \Rightarrow ((r1\_xxreal\_0 k6\_numbers X0) \Rightarrow (X0 \in k5\_numbers)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l2\_struct\_0 X0)) \Rightarrow (\forall X1. \\ & ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0)) \wedge \\ & ((v1\_algseq\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow ((r1\_xxreal\_0 k6\_numbers \\ & (k2\_hurwitz X0 X1)) \Rightarrow (v1\_uproots X1 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (3)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0.(v1\_finset\_1 X0) \Rightarrow (k5\_card\_1 X0 = k1\_card\_1 X0) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\ & X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge \\ & ((v4\_rlvect\_1 X0) \wedge ((v3\_group\_1 X0) \wedge ((v5\_group\_1 X0) \wedge ((v4\_vectsp\_1 \\ & X0) \wedge ((v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0)))))))))) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 k5\_numbers) \Rightarrow (\forall X2.((v1\_funct\_1 X2) \wedge (( \\ & v1\_funct\_2 X2 k5\_numbers (u1\_struct\_0 X0)) \wedge ((v1\_algseq\_1 X2 X0) \wedge \\ & ((v1\_uproots X2 X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow (\neg(k2\_hurwitz X0 X2 = X1) \wedge \\ & (\forall X3.(m1\_subset\_1 X3 k5\_numbers) \Rightarrow (\neg(X3 = k5\_card\_1 (k6\_polynom5 \\ & X0 X2)) \wedge (r1\_xreal\_0 X3 X1)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge \\ & ((v13\_algstr\_0 X0) \wedge ((v3\_group\_1 X0) \wedge ((v5\_group\_1 X0) \wedge ((v4\_vectsp\_1 \\ & X0) \wedge ((v5\_vectsp\_1 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge \\ & ((v4\_rlvect\_1 X0) \wedge ((v1\_vectsp\_2 X0) \wedge (l6\_algstr\_0 X0)))))))))) \wedge \\ & ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0)) \wedge \\ & ((v1\_algseq\_1 X1 X0) \wedge ((v1\_uproots X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0)))))))) \Rightarrow (v1\_finset\_1 \\ & (k6\_polynom5 X0 X1)) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(l6\_algstr\_0 X0) \Rightarrow ((l2\_algstr\_0 X0) \wedge (l5\_algstr\_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.(l2\_algstr\_0 X0) \Rightarrow ((l2\_struct\_0 X0) \wedge (l1\_algstr\_0 X0)) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2\_struct\_0 X0) \wedge (l2\_struct\_0 X0)) \wedge \\ & ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0)) \wedge \\ & ((v1\_algseq\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow (v1\_int\_1 (k2\_hurwitz X0 \\ & X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0. (l2\_algstr\_0 X0) \Rightarrow & (((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\ X0) \wedge ((v3\_rlvect\_1 X0) \wedge (v4\_rlvect\_1 X0)))) \Rightarrow & ((\neg v2\_struct\_0 X0) \wedge \\ & ((v1\_algstr\_1 X0) \wedge (v4\_algstr\_1 X0)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0. (l6\_algstr\_0 X0) \Rightarrow & (((\neg v2\_struct\_0 X0) \wedge (v5\_vectsp\_1 \\ X0)) \Rightarrow & ((\neg v2\_struct\_0 X0) \wedge ((v1\_vectsp\_1 X0) \wedge (v2\_vectsp\_1 X0)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0. (l6\_algstr\_0 X0) \Rightarrow & (((\neg v2\_struct\_0 X0) \wedge ((v6\_algstr\_0 \\ X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v3\_group\_1 X0) \wedge ((v5\_group\_1 X0) \wedge ( \\ (v1\_vectsp\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge (v1\_algstr\_1 X0)))))) \Rightarrow & \\ ((\neg v2\_struct\_0 X0) \wedge ((v6\_algstr\_0 X0) \wedge ((v3\_group\_1 X0) \wedge ((v5\_group\_1 \\ X0) \wedge ((v1\_vectsp\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v1\_vectsp\_2 X0) \wedge \\ (v1\_algstr\_1 X0)))))))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0. (l2\_algstr\_0 X0) \Rightarrow & (((\neg v2\_struct\_0 X0) \wedge (v4\_algstr\_1 \\ X0)) \Rightarrow & ((\neg v2\_struct\_0 X0) \wedge ((v5\_algstr\_0 X0) \wedge ((v6\_algstr\_0 X0) \wedge \\ & ((v2\_algstr\_1 X0) \wedge (v3\_algstr\_1 X0)))))) \end{aligned} \quad (14)$$

**Theorem 1**

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\ X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge \\ ((v4\_rlvect\_1 X0) \wedge ((v3\_group\_1 X0) \wedge ((v5\_group\_1 X0) \wedge ((v4\_vectsp\_1 \\ X0) \wedge ((v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0)))))))))) \Rightarrow (\forall X1. \\ ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0)) \wedge \\ ((v1\_algseq\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow ((r1\_xreal\_0 k6\_numbers \\ (k2\_hurwitz X0 X1)) \Rightarrow ((v1\_finset\_1 (k6\_polynom5 X0 X1)) \wedge (\exists X2. \\ (m1\_subset\_1 X2 k5\_numbers) \wedge (\exists X3. (m1\_subset\_1 X3 k5\_numbers) \wedge \\ ((X3 = k2\_hurwitz X0 X1) \wedge ((X2 = k1\_card\_1 (k6\_polynom5 X0 X1)) \wedge ( \\ r1\_xreal\_0 X2 X3)))))))))) \end{aligned}$$