

t49_hurwitz
(TMbSbXFQ7cFZqocUif9ZAvT6fS4Zb1eRcHg)

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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 $k1_complfld : \iota$ 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 $v1_hurwitz : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k3_complex1 : \iota \Rightarrow \iota$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $k2_polynom4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_complex1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ 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 $v36_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $v3_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $v6_vectsp_1 : \iota \Rightarrow o$ 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 $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_struct_0 : \iota \Rightarrow o$ be given. Let $v1_group_1 : \iota \Rightarrow o$ be given. Let $r1_polynom5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$k4_struct_0 \ k1_complfld = k5_complex1 \tag{1}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 \ X0) \Rightarrow ((\neg(X0 \neq k6_numbers) \wedge (r1_xxreal_0 \ (k17_complex1 \ X0) \ k6_numbers)) \wedge (\neg(\neg r1_xxreal_0 \ (k17_complex1 \ X0) \ k6_numbers) \wedge (X0 = k6_numbers))) \tag{2}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \tag{3}$$

Assume the following.

$$k5_complex1 = k1_xboole_0 \tag{4}$$

Assume the following.

$$\begin{aligned} & (\neg v6_struct_0\ k1_complfld) \wedge ((v13_algstr_0\ k1_complfld) \wedge ((\\ & v33_algstr_0\ k1_complfld) \wedge ((v36_algstr_0\ k1_complfld) \wedge ((v3_group_1 \\ & k1_complfld) \wedge ((v5_group_1\ k1_complfld) \wedge ((v3_vectsp_1\ k1_complfld) \wedge \\ & ((v5_vectsp_1\ k1_complfld) \wedge ((v6_vectsp_1\ k1_complfld) \wedge ((v2_rlvect_1 \\ & k1_complfld) \wedge ((v3_rlvect_1\ k1_complfld) \wedge (v4_rlvect_1\ k1_complfld)))))))))) \\ & \end{aligned} \tag{5}$$

Assume the following.

$$(\neg v2_struct_0\ k1_complfld) \wedge (v36_algstr_0\ k1_complfld) \tag{6}$$

Assume the following.

$$\forall X0. (l6_algstr_0\ X0) \Rightarrow ((l2_algstr_0\ X0) \wedge (l5_algstr_0\ X0)) \tag{7}$$

Assume the following.

$$\forall X0. (l5_algstr_0\ X0) \Rightarrow ((l4_algstr_0\ X0) \wedge (l4_struct_0\ X0)) \tag{8}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0\ X0) \wedge ((v1_group_1 \\ & X0) \wedge (l6_algstr_0\ X0))) \wedge (((v1_funct_1\ X1) \wedge ((v1_funct_2\ X1\ k5_numbers \\ & (u1_struct_0\ X0)) \wedge ((v1_algseq_1\ X1\ X0) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ k5_numbers\ (u1_struct_0\ X0)))))) \wedge (m1_subset_1 \\ & X2\ (u1_struct_0\ X0)))) \Rightarrow (m1_subset_1\ (k2_polynom4\ X0\ X1\ X2)\ (u1_struct_0 \\ & X0)) \\ & \end{aligned} \tag{9}$$

Assume the following.

$$(v36_algstr_0\ k1_complfld) \wedge (l6_algstr_0\ k1_complfld) \tag{10}$$

Assume the following.

$$\begin{aligned} & \forall X0. (((v1_funct_1\ X0) \wedge ((v1_funct_2\ X0\ k5_numbers\ (u1_struct_0 \\ & k1_complfld) \wedge ((v1_algseq_1\ X0\ k1_complfld) \wedge (m1_subset_1\ X0 \\ & (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (u1_struct_0\ k1_complfld)))))) \Rightarrow \\ & ((v1_hurwitz\ X0) \Leftrightarrow (\forall X1. (m1_subset_1\ X1\ (u1_struct_0\ k1_complfld) \Rightarrow \\ & (\neg (r1_polynom5\ k1_complfld\ X0\ X1) \wedge (r1_xreal_0\ k6_numbers\ (k3_complex1 \\ & X1)))))) \\ & \end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned} & \forall X0. (((\neg v2_struct_0\ X0) \wedge ((v1_group_1\ X0) \wedge (l6_algstr_0 \\ & X0))) \Rightarrow (\forall X1. ((v1_funct_1\ X1) \wedge ((v1_funct_2\ X1\ k5_numbers \\ & (u1_struct_0\ X0)) \wedge ((v1_algseq_1\ X1\ X0) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ k5_numbers\ (u1_struct_0\ X0)))))) \Rightarrow (\forall X2. \\ & (m1_subset_1\ X2\ (u1_struct_0\ X0) \Rightarrow ((r1_polynom5\ X0\ X1\ X2) \Leftrightarrow (k2_polynom4 \\ & X0\ X1\ X2 = k4_struct_0\ X0)))) \\ & \end{aligned} \tag{12}$$

Assume the following.

$$\forall X0.(l4_algstr_0 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((v3_vectsp_1 X0) \wedge (v6_vectsp_1 X0))) \Rightarrow ((\neg v2_struct_0 X0) \wedge (v1_group_1 X0))) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 k1_complfld)) \Rightarrow (v1_xcmplx_0 X0) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers (u1_struct_0 \\ & \quad k1_complfld)) \wedge ((v1_algseq_1 X0 k1_complfld) \wedge (m1_subset_1 X0 \\ & \quad (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 k1_complfld)))))) \Rightarrow \\ & \quad ((v1_hurwitz X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 k1_complfld)) \Rightarrow \\ & \quad (\neg(r1_xxreal_0 k6_numbers (k3_complex1 X1)) \wedge (r1_xxreal_0 (k17_complex1 \\ & \quad \quad (k2_polynom4 k1_complfld X0 X1)) k6_numbers)))))) \end{aligned}$$