

l30_hurwitz (TM- RLK4L1GG674M2oA1qcqZaSzcndm8XRZhT)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ 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 $k2_hurwitz : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_polynom3 : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_int_1 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $np_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_algseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow ((r1_xxreal_0 X0 X1) \Leftrightarrow (r1_xxreal_0 (k6_xcmplx_0 \\ & X0 X2) (k6_xcmplx_0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 \\ & X0 X1) \Rightarrow ((v1_xboole_0 X0) \vee ((v2_xxreal_0 X1) \vee (v3_xxreal_0 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1_subset_1 X1 (\\ & k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow ((r1_xreal_0 k6_numbers X0) \Rightarrow (X0 \in k5_numbers)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow (\forall X1. \\ ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge \\ ((v1_algseq_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ k5_numbers (u1_struct_0 X0)))))) \Rightarrow ((k2_hurwitz X0 X1 = k4_xcmplx_0 \\ np_1) \Leftrightarrow (r2_funct_2 k5_numbers (u1_struct_0 X0) X1 (k9_polynom3 \\ X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k2_xcmplx_0 X0 k6_numbers = X0) \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((\neg r1_xreal_0 (k1_nat_1 X1 np_1) X0) \Leftrightarrow (r1_xreal_0 X0 X1))) \quad (10)$$

Assume the following.

$$\begin{aligned} ((v2_xreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (11)$$

Assume the following.

$$(m2_subset_1 np_0 k1_numbers k5_numbers) \wedge ((m1_subset_1 np_0 k5_numbers) \wedge (m1_subset_1 np_0 k1_numbers)) \quad (12)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (13)$$

Assume the following.

$$k6_xcmplx_0 np_1 np_1 = np_0 \quad (14)$$

Assume the following.

$$k2_xcmplx_0 (k4_xcmplx_0 np_1) np_1 = np_0 \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X2)\wedge \\ & ((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))\wedge((v1_funct_1 X3)\wedge((v1_funct_2 X3 X0 X1)\wedge(m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\Rightarrow((r2_funct_2 X0 X1 X2 \\ & X3)\Leftrightarrow(X2 = X3)) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 \\ & X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \end{aligned} \quad (17)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (18)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (19)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v7_ordinal1 X0)\wedge(m1_subset_1 X1 k5_numbers))\Rightarrow \\ & (k1_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \end{aligned} \quad (20)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l2_struct_0 X0))\Rightarrow((v1_funct_1 \\ & (k9_polynom3 X0))\wedge((v1_funct_2 (k9_polynom3 X0) k5_numbers (\\ & u1_struct_0 X0))\wedge(v1_algseq_1 (k9_polynom3 X0) X0))) \end{aligned} \quad (21)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (22)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v2_xxreal_0 X0)\wedge(v1_xreal_0 X0))\wedge(\\ & (\neg v3_xxreal_0 X1)\wedge(v1_xreal_0 X1)))\Rightarrow(v2_xxreal_0 (k2_xcmplx_0 \\ & X1 X0)) \end{aligned} \quad (23)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l2_struct_0 X0))\Rightarrow((v1_funct_1 \\ & (k9_polynom3 X0))\wedge((v1_funct_2 (k9_polynom3 X0) k5_numbers (\\ & u1_struct_0 X0))\wedge(m1_subset_1 (k9_polynom3 X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \end{aligned} \quad (24)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (25)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 \ X0) \wedge (l2_struct_0 \ X0)) \wedge \\ & ((v1_funct_1 \ X1) \wedge ((v1_funct_2 \ X1 \ k5_numbers \ (u1_struct_0 \ X0)) \wedge \\ & ((v1_algseq_1 \ X1 \ X0) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & \quad k5_numbers \ (u1_struct_0 \ X0)))))) \Rightarrow (v1_int_1 \ (k2_hurwitz \ X0 \\ & \quad X1)) \end{aligned} \quad (26)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 \ X0) \wedge (l2_struct_0 \ X0)) \wedge \\ & ((v1_funct_1 \ X1) \wedge ((v1_funct_2 \ X1 \ k5_numbers \ (u1_struct_0 \ X0)) \wedge \\ & ((v1_algseq_1 \ X1 \ X0) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & \quad k5_numbers \ (u1_struct_0 \ X0)))))) \Rightarrow (m1_subset_1 \ (k1_algseq_1 \\ & \quad X0 \ X1) \ k5_numbers) \end{aligned} \quad (27)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 \ X0) \wedge (l2_struct_0 \ X0)) \Rightarrow (\forall X1. \\ & ((v1_funct_1 \ X1) \wedge ((v1_funct_2 \ X1 \ k5_numbers \ (u1_struct_0 \ X0)) \wedge \\ & ((v1_algseq_1 \ X1 \ X0) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & \quad k5_numbers \ (u1_struct_0 \ X0)))))) \Rightarrow (k2_hurwitz \ X0 \ X1 = k6_xcmplx_0 \\ & \quad (k1_algseq_1 \ X0 \ X1) \ np_1)) \end{aligned} \quad (28)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 \ X0) \wedge (v1_xcmplx_0 \ X1)) \Rightarrow (k2_xcmplx_0 \ X0 \ X1 = k2_xcmplx_0 \ X1 \ X0) \quad (29)$$

Assume the following.

$$\forall X0. \forall X1. ((v7_ordinal1 \ X0) \wedge (m1_subset_1 \ X1 \ k5_numbers)) \Rightarrow (k1_nat_1 \ X0 \ X1 = k1_nat_1 \ X1 \ X0) \quad (30)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (31)$$

Assume the following.

$$\forall X0. (v1_xreal_0 \ X0) \Rightarrow (v1_xxreal_0 \ X0) \quad (32)$$

Assume the following.

$$\forall X0. ((v1_xxreal_0 \ X0) \wedge (v2_xxreal_0 \ X0)) \Rightarrow ((\neg v1_xboole_0 \ X0) \wedge ((v1_xxreal_0 \ X0) \wedge (\neg v3_xxreal_0 \ X0))) \quad (33)$$

Assume the following.

$$\forall X0.(v1_int_1 X0)\Rightarrow(v1_xreal_0 X0) \quad (34)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v1_xreal_0 X0) \quad (35)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (36)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow(\neg v3_xxreal_0 X0) \quad (37)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (38)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l2_struct_0 X0))\Rightarrow(\forall X1. \\ & ((v1_funct_1 X1)\wedge((v1_funct_2 X1 k5_numbers (u1_struct_0 X0))\wedge \\ & ((v1_algseq_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers (u1_struct_0 X0))))))\Rightarrow((m1_subset_1 (k2_hurwitz \\ & X0 X1) k5_numbers)\Leftrightarrow(X1\neq k9_polynom3 X0))) \end{aligned}$$