t44_uniroots (TMFNqhfCNSBfH-BUqwkk26mJUMhCWwDfY7uY)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_complfld : \iota$ be given. Let $k2\_polynom4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_uniroots : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k2\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_group\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $v6\_membered : \iota \Rightarrow o$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v36\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $k2\_numbers : \iota$ be given. Let $u1\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $k27\_binop\_2 : \iota$ be given. Let $u2\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $k29\_binop\_2 : \iota$ be given. Let $k5\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k6\_complex1 : \iota$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_complex1 : \iota$ be given. Assume the following.

$$\forall X0.(m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers) \Rightarrow (\forall X1.\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_complfld)) \Rightarrow (\neg(m1\_subset\_1\ X1\ k1\_numbers) \wedge (\forall X2.(m1\_subset\_1\ X2\ k1\_numbers) \Rightarrow (\neg(X2 = X1) \wedge (k2\_binop\_1\ (u1\_struct\_0\ k1\_complfld)\ k5\_numbers\ (u1\_struct\_0\ k1\_complfld)\ (k4\_group\_1\ k1\_complfld)\ X1\ X0 = k2\_newton\ X2\ X0))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers)) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_complfld)) \Rightarrow (k2\_polynom4\ k1\_complfld\ (k4\_uniroots\ X0\ k1\_complfld)\ X1 = k4\_binop\_2\ (k2\_binop\_1\ (u1\_struct\_0\ k1\_complfld)\ k5\_numbers\ (u1\_struct\_0\ k1\_complfld)\ (k4\_group\_1\ k1\_complfld)\ X1\ X0)\ np\_\_1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{3}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1)\wedge(m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_1\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ X1)) \tag{5}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0)\wedge(v1\_xcmplx\_0\ X1))\Rightarrow(k4\_binop\_2\ X0\ X1 = k6\_xcmplx\_0\ X0\ X1) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k10\_binop\_2\ X0\ X1 = k6\_xcmplx\_0\ X0\ X1) \tag{8}$$

Assume the following.

$$\neg v1\_finset\_1\ k4\_ordinal1 \tag{9}$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \tag{10}$$

Assume the following.

$$\neg v1\_xboole\_0\ k1\_numbers \tag{11}$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v7\_ordinal1\ X1))\Rightarrow(m1\_subset\_1\ (k2\_newton\ X0\ X1)\ k1\_numbers) \tag{13}$$

Assume the following.

$$(v36\_algstr\_0\ k1\_complfld)\wedge(l6\_algstr\_0\ k1\_complfld) \tag{14}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0)\Leftrightarrow(X0 \in k2\_numbers) \tag{15}$$

Assume the following.

$$\forall X0.((v36\_algstr\_0\ X0)\wedge(l6\_algstr\_0\ X0))\Rightarrow((X0 = k1\_complfld)\Leftrightarrow ((u1\_struct\_0\ X0 = k2\_numbers)\wedge((u1\_algstr\_0\ X0 = k27\_binop\_2)\wedge ((u2\_algstr\_0\ X0 = k29\_binop\_2)\wedge((k5\_struct\_0\ X0 = k6\_complex1)\wedge (k4\_struct\_0\ X0 = k5\_complex1)))))) \tag{16}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{17}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \tag{18}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{19}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(v1\_finset\_1\ X0) \tag{20}$$

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (v7\_ordinal1\ X1)) \tag{21}$$

Theorem 1

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge(m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers))\Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k1\_numbers)\Rightarrow(\exists X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ k1\_complfld))\wedge((X2 = X1)\wedge(k2\_polynom4\ k1\_complfld\ (k4\_uniroots\ X0\ k1\_complfld)\ X2 = k10\_binop\_2\ (k2\_newton\ X1\ X0)\ np\_\_1))))$$